Analogical Information Presentation Method Based on Already Visited Spot for Understanding of Unvisited Area

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***Abstract*—In recent years, when planning tourist spots, planning is often made by utilizing tourist information on the Web. However, after deciding the area you want to visit from many areas, the user also needs enormous amount of time and effort to find tourist spots that match your image. In addition, there are cases where the user feels expectation and anxiety with respect to the unvisited spot. In this research, in order to support understanding of users' unknown spots, we propose analogy information presentation that supports the understanding by fitting the features of tourist spots that have already visited to unvisited spots. In order to emphasize the features of the tourist spots themselves, extraction of features of each tourist spot is done by work using all reviews of tourist spots entered by the user, all reviews of tourist spots in the target area. We also conduct an evaluation experiment to construct the prototype system and verify the effect of the analogy information between the visited spot and the unvisited spot.**

***Index Terms*—tourist spots, analogy, understanding support, reviews, cosine similarity, tfidf, harmonic mean.**

I. Introduction

WHEN deciding the travel destination, the traveler selects tourist spots by planning a travel plan, watching tourist spots search sites and books related to tourist information. However, after deciding the area you want to visit from many areas,and further from their many tourist spots in the area is not easy to find. In the case where the tourist spots desired to go are not decided, it is considered that it is more likely to decide tourist spots by looking at ranking and recommendation information. At this time, the image for the tourist spots selected by the user becomes ambiguous, which may cause anxiety.

In recent years, the speed of development of tourism industry and social networking service is accelerating, and the number of users who post reviews on tourist spots experienced to the tourist spot search site is increasing. In order to effectively understand various tourist spots, it is essential to consider the correspondence between unknown information and existing information based on existing information. This way of thinking is equivalent to analogy which applies to the things by previous experiences (called "bases"), or problems (called "targets"). For example, whereas unknown spots such as "Kanazawa's Nisityayagai", if you explain that it is similar to the already visited "Kyoto Hanamikoji", it may make it easier to understand the image.

Fig. 1. Analogical information presentation method based on already visited spot for understanding of unvisited area

In this research, in order to support understanding of users' unknown spots, we propose analogy information presentation that supports the understanding by fitting the features of tourist spots that have already visited to unvisited spots. Specifically, from the already visited spot and the unvisited area entered by the user, we use the review to extract the unique features of each spot in the already visited spot and the unique features of each spot in the unvisited area, compare and present analogy information. With this prototype system, users aim to support understanding of unvisited areas. Fig. **??** is a conceptual diagram of the proposed method.

The structure of this paper is as follows. Section 2 describes related The structure of this paper is as follows. Section 2 describes related research. Section 3 gives an overview of the proposed method. Section 4 describes evaluation experiments and considerations to verify the effect of the constructed prototype system. Section 5 describes with a summary and future issues.

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Fig. 2. Concept of similarity calculation

II. Related Work

III. Analogical Information Presentation Method

We propose an analogy information presentation method based on an already visited spot for supporting understanding of unvisited areas. Specifically, first, the user inputs a plurality of tourist spots that have been visited and tourist spot area information that user wishes to visit. Use the already visited spot review vector to find the feature vector for each visited spot. Similarly, the feature vector of each spot in the area is obtained for an unvisited spot. Next, we associate unvisited tourist spots with features similar to the difference features between the visited spot review vector and the unvisited spot review vector. Finally, analogy information for supporting understanding of unvisited areas is defined using TFIDF and presented to the user.

A. Relative features of tourist spots

In this research, features of tourist spots make use of relative features. The relative feature is a unique feature when a specific tourist spot is compared with other tourist spots included in a set of tourist spots.

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$$\mathbf{X}[k+1] = A\mathbf{X}[k] + B\mathbf{u}[k] \tag{1}$$

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$$\theta_c[k+1] = \theta_c[k] + Tu_p[k]$$

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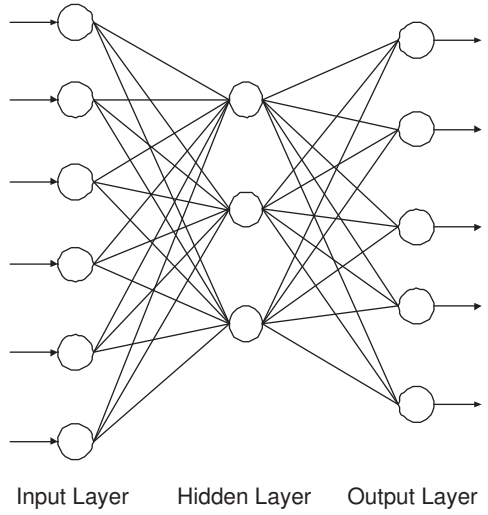

Fig. 3. A Simple Neural Network Structure

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IV. Conclusion

The conclusion goes here.

TABLE I
AN EXAMPLE OF A TABLE

One	Two	Five
Two	Four	Ten

A conclusion section is not compulsory. Although a conclusion may review the main points of the paper, do not replicate the abstract as the conclusion. A conclusion might elaborate on the importance of the work or suggest applications and extensions [**?**], [**?**], [**?**], [**?**], [**?**], [**?**], [**?**].

Appendix A
Proof of the First Zonklar Equation

Appendix one text goes here.

Appendix B

Appendix two text goes here.

Acknowledgment

The authors would like to thank...

The preferred spelling of the word "acknowledgment" in American English is without an "e" after the "g." Use the singular heading even if you have many acknowledgments. Avoid expressions such as "One of us (S.B.A.) would like to thank ... ." Instead, write "F. A. Author thanks ... ." Sponsor and financial support acknowledgments are placed in the unnumbered footnote on the first page, not here.

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